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EXAMINER	
WANG, JIN CHENG	
ART UNIT	PAPER NUMBER
2672	

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/801,913	Applicant(s) TAKEUCHI ET AL.
	Examiner Jin-Cheng Wang	Art Unit 2672

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____ .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-23* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-23* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Response to Amendment

1. The amendments filed on 06/24/2003 have been entered. Claims 1, 2, 4-6, and 9-15 have been amended. Claims 16-23 have been newly added.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-23 are rejected under 35 U.S.C. 102(e) as being anticipated by Glen U.S. Pat. No. 6,157,415 (hereinafter Glen).

4. Claim 1:

Glen teaches an overlay image processing device (e.g., figures 2, 7-8) for generating an overlay image signal composed of an n number of superimposed image signals, n being an integer greater than 2, the overlay image processing device comprising:

A plurality of digital decoders configured to digitally decode a plurality of image signals (e.g., the decoders are inherently incorporated into color base conversion module 42, 44, and 46 of figures 2, 7-8. See examiner's remarks regarding the inherency; column 11, lines 1-67; column 12, lines 1-45);

An image selector (e.g., the input select 106 of figures 6A-6C/convert select 104 of figures 6A-6C/control 60 of the configuration module 40 in figures 2, 7-8; see also column 3, lines 35-67; column 4, lines 1-55) configured to receive outputs from each of the plurality of digital decoders and configured to select from among a plurality of digitally decoded image signals one reference image signal and (n-1) number of superimposing image signals (See, for example, figures 6-8; column 8, lines 4-15);

A plurality of resolution converters (e.g., blending module 48 and 50 being similar to the programmable blending module 116 performing resolution conversion function. See figures 7-8, column 8, lines 45-60) configured to receive respective outputs of the image selector such that any resolution converter can receive any output convert resolutions of the n number of selected image signals including the reference image signal and the (n-1) number of superimposing image signals into respective desired resolutions (e.g., figures 2-8; column 8, lines 45-60); and

An image synthesizer (e.g., blend module 76, 78 and 80 of figure 3) configured to superimpose the (n-1) number of converted superimposing image signals on the converted reference signal (e.g., figures 2-8; column 6, lines 15-45).

Claim 2:

The claim 2 encompasses the same scope of invention as that of claim 1 except additional claimed limitation of at least one of the plurality of image signals being a display signal output from a personal computer. However, Glen further discloses the claimed limitation of at least one of the plurality of image signals being a display signal output from a personal computer (e.g., figure 2; column 1, lines 10-60).

Claim 3:

The claim 3 encompasses the same scope of invention as that of claim 1 except additional claimed limitation of the image selector selects the reference image signal and the (n-1) number of superimposing image signals according to an arbitrary predetermined order of superposition for the n number of image signals; and the image synthesizer superimposes the (n-1) number of converted superimposing image signals on the converted reference image signal according to the order of superposition. However, Glen further discloses the claimed limitation of the image selector selects the reference image signal and the (n-1) number of superimposing image signals according to an arbitrary predetermined order of superposition for the n number of image signals (figures 6 and 9; column 3, lines 35-67; column 4, lines 1-55); and the image synthesizer superimposes the (n-1) number of converted superimposing image signals on the converted reference image signal according to the order of superposition (e.g., figure 5; column 6, lines 15-45).

Claim 4:

The claim 4 encompasses the same scope of invention as that of claim 1 except additional claimed limitation of a scan converter configured to convert at least one of the interlaced image signals selected by the image selector into a non-interfaced image signals selected by the image selector into a non-interlaced image signal when the at least one of the image signals selected by the image selector is an interlaced image signal. However, Glen further discloses the claimed limitation of a scan converter configured to convert at least one of the interlaced image signals selected by the image selector into a non-interfaced image signals selected by the image selector into a non-interlaced image signal when the at least one of the image signals selected by the image selector is an interlaced image signal (figures 5, 6 and 9).

Claim 5:

The claim 5 encompasses the same scope of invention as that of claim 1 except additional claimed limitation of the image synthesizer having the n number of 2-input image synthesizers, each 2-input image synthesizer being configured to receive upper-side and lower-side image signals and superimpose the upper-side image signal on the lower-side image signal; the n number of 2-input image synthesizers being connected in series in multistage fashion such that the 2-input image synthesizer of a first stage uses the reference image signal as the lower-side image signal and a first superimposing image signal as the upper-side image signal, while the 2-input image synthesizer of ith stage, where I is between 2 and n, inclusive, uses an output of the 2-input image synthesizer of (I –1)th stage as the lower-side image signal and ith superimposing image signal as the upper-side image signal. However, Glen further discloses the claimed limitation of the image synthesizer having the n number of 2-input image synthesizers, each 2-input image synthesizer being configured to receive upper-side and lower-side image signals and superimpose the upper-side image signal on the lower-side image signal; the n number of 2-input image synthesizers being connected in series in multistage fashion such that the 2-input image synthesizer of a first stage uses the reference image signal as the lower-side image signal and a first superimposing image signal as the upper-side image signal, while the 2-input image synthesizer of ith stage, where I is between 2 and n, inclusive, uses an output of the 2-input image synthesizer of (I –1)th stage as the lower-side image signal and ith superimposing image signal as the upper-side image signal (figures 5, 6 and 9, and column 3, lines 51-65).

5. Claim 6:

Glen teaches an overlay image display device (figure 1, column 8, lines 46-58, column 9, lines 39-53) for displaying an overlay image composed of an number of superimposed images, n being an integer greater than 1, the overlay image display device (figure 1) comprising:

An overlay image processing device (figure 2) for generating an overlay image signal composed of an n number of superimposed image signals, and the overlay display device for displaying an image represented by the overlay image signal; wherein the overlay image processing device includes:

A plurality of digital decoders configured to digitally decode a plurality of image signals (e.g., the decoders are inherently incorporated into color base conversion module 42, 44, and 46 of figure 2. See examiner's remarks regarding the inherency; column 11, lines 1-67; column 12, lines 1-45);

A plurality of digital decoders configured to digitally decode a plurality of image signals (e.g., the decoders are inherently incorporated into color base conversion module 42, 44, and 46 of figures 2, 7-8. See examiner's remarks regarding the inherency; column 11, lines 1-67; column 12, lines 1-45);

An image selector (e.g., the input select 106 of figures 6A-6C/convert select 104 of figures 6A-6C/control 60 of the configuration module 40 in figures 2, 7-8; see also column 3, lines 35-67; column 4, lines 1-55) configured to receive outputs from each of the plurality of digital decoders and configured to select from among a plurality of digitally decoded image signals one reference image signal and (n-1) number of superimposing image signals (See, for example, figures 6-8; column 8, lines 4-15);

A plurality of resolution converters (e.g., blending module 48 and 50 being similar to the programmable blending module 116 performing resolution conversion function. See figures 7-8, column 8, lines 45-60) configured to receive respective outputs of the image selector such that any resolution converter can receive any output convert resolutions of the n number of selected image signals including the reference image signal and the (n-1) number of superimposing image signals into respective desired resolutions (e.g., figures 2-8; column 8, lines 45-60); and

An image synthesizer (e.g., blend module 76, 78 and 80 of figure 3) configured to superimpose the (n-1) number of converted superimposing image signals on the converted reference signal (e.g., figures 2-8; column 6, lines 15-45).

Claim 7:

The claim 7 encompasses the same scope of invention as that of claim 6 except additional claimed limitation of at least one of the plurality of image signals being a display signal output from a personal computer. However, Glen further discloses the claimed limitation of at least one of the plurality of image signals being a display signal output from a personal computer (e.g., figure 2; column 1, lines 10-60).

Claim 8:

The claim 8 encompasses the same scope of invention as that of claim 6 except additional claimed limitation of the image selector selects the reference image signal and the (n-1) number of superimposing image signals according to an arbitrary predetermined order of superposition for the n number of image signals; and the image synthesizer superimposes the (n-1) number of converted superimposing image signals on the converted reference image signal according to the order of superposition. However, Glen further discloses the claimed limitation of the image

selector selects the reference image signal and the (n-1) number of superimposing image signals according to an arbitrary predetermined order of superposition for the n number of image signals (figures 6 and 9; column 3, lines 35-67; column 4, lines 1-55); and the image synthesizer superimposes the (n-1) number of converted superimposing image signals on the converted reference image signal according to the order of superposition (e.g., figure 5; column 6, lines 15-45).

Claims 9-10:

The claim 9(10) encompasses the same scope of invention as that of claim 6 except additional claimed limitation identical to that set forth in claim 4(5). The claim 9(10) is rejected for the same reason set forth in claim 4(5).

6. Claims 11-15:

Each of the claims 11-15 is a rephrasing of the claims 1-5 respectively in a method form. The claims are rejected for the same reason as set forth above.

7. Claims 16-19:

Each of the claims 16-19 encompasses the same scope of invention as that of claims 1-4. The claims are subject to the same rationale of rejection set forth in claims 1-4.

8. Claims 20-23:

Each of the claims 20-23 is a rephrasing of the claims 16-19 respectively in a method form. The claims are rejected for the same reason as set forth above.

Remarks

9. Applicant's arguments, filed 06/24/2003, paper number 8, have been fully considered but they are not deemed to be persuasive.

10. Applicant argues in essence with respect to claim 1 and similar claims that:

> "As an advantage, flexibility is facilitated because any resolution converter can receive as an input the digitally decoded signal from any of the digital decoders...In contrast, Glen only discusses a system in which 'the multiplexor 100...selects one of the output signals. The selected input signal is passed to the programmable color base converting module 102'...Also, Figures 2 and 6A-6C of Glen show that various signals such as 'RGB in,' 'TV in,' and 'HDTV in' of different 'color bases' are input directly to a 'mux 100,' without digital decoders first digitally decoding the input signals. That arrangement differs from the system of the pending claims, in which an image selector selects 'from among the plurality of digitally decoded image signals' that are digitally decoded by a plurality of digital decoders."

This is not found persuasive because applicant ignores the fact that Glen inherently teaches a plurality of digital decoders within any color base-converting module. This is because a color base converter necessarily provides a set of decoders (such as address decoders) for decoding bits/pixel. Therefore, Glen teaches resolution converters that receive as input the color converted signals from any of the color base-converting module. The configuration module 40 of figure 8, for example, determines which output signals from the color converting modules are selected. Therefore, the examiner asserts that Glen teach an image selector (such as the configuration module 40) selects from among the plurality of digitally decoded image signals that are digitally decoded by a plurality of digital decoders (by a plurality of the color base-converting modules).

Notice that Glen teaches a plurality of color base-converting modules in the image-processing device with each of the modules having a plurality of digital decoders.

9. Applicant argues in essence with respect to claim 1 and similar claims that:

"Moreover, Figures 6A-6C of Glen show a system in which only certain subsets of image inputs can be fed to various 'blend modules' (76, 78, 80). Because the 'blend modules' according to Glen are specialized to blend input signals of a particular format, e.g., an 'RGB blend module 76' or a 'TV blend module 80,' those 'blend modules' cannot receive as an input any of the signals output from a selector, as in the pending claims."

In response, applicant should not exclusively argue with one particular embodiment of Glen in comparison to the claimed invention. In this regard, Applicant should consider other embodiments of the Glen's teaching. Specifically, in figures 7 and 8, Glen teaches programmable blending module 116 (which functions as a plurality of blending modules set forth in figures 6A-6C) and configuration module 40 (which functions as an image selector corresponding to applicant's claimed invention). It is clearly shown in Figures 7 and 8 that the blending module receives as input any of the signals output from a selector (i.e., the configuration module 40) in combination with the multiplexers 110/112/114.

10. Applicant argues in essence with respect to claim 1 and similar claims that:

"Accordingly, it is respectfully submitted that independent claims 1, 6, 11 and each of the claims depending therefrom are allowable. "

This is not found persuasive because

Glen teaches an overlay image processing device (e.g., figures 2, 7-8) for generating an overlay image signal composed of an n number of superimposed image signals, n being an integer greater than 2, the overlay image processing device comprising:

A plurality of digital decoders configured to digitally decode a plurality of image signals (e.g., the decoders are inherently incorporated into color base conversion module 42, 44, and 46 of figures 2, 7-8. See examiner's remarks regarding the inherency; column 11, lines 1-67; column 12, lines 1-45);

An image selector (e.g., the input select 106 of figures 6A-6C/convert select 104 of figures 6A-6C/control 60 of the configuration module 40 in figures 2, 7-8; see also column 3, lines 35-67; column 4, lines 1-55) configured to receive outputs from each of the plurality of digital decoders and configured to select from among a plurality of digitally decoded image signals one reference image signal and (n-1) number of superimposing image signals (See, for example, figures 6-8; column 8, lines 4-15);

A plurality of resolution converters (e.g., blending module 48 and 50 being similar to the programmable blending module 116 performing resolution conversion function. See figures 7-8, column 8, lines 45-60) configured to receive respective outputs of the image selector such that any resolution converter can receive any output convert resolutions of the n number of selected image signals including the reference image signal and the (n-1) number of superimposing image signals into respective desired resolutions (e.g., figures 2-8; column 8, lines 45-60); and

An image synthesizer (e.g., blend module 76, 78 and 80 of figure 3) configured to superimpose the (n-1) number of converted superimposing image signals on the converted reference signal (e.g., figures 2-8; column 6, lines 15-45).

Therefore, Glen fulfills the amended claim 1 as currently drafted.

Conclusion

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jin-Cheng Wang whose telephone number is (703) 605-1213. The examiner can normally be reached on 8:00 AM - 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mike Razavi can be reached on (703) 305-4713. The fax phone numbers for the

organization where this application or proceeding is assigned are (703) 308-6606 for regular communications and (703) 308-6606 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 395-3900.

jcw
July 26, 2003

MICHAEL RAZAVI
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600